

Remarks

The Office Action dated July 21, 2005 has been received and duly noted. Applicant appreciates the Examiner's indication that Claims 14-20 are allowed.

With respect to Claim 7 and the rejection under 35 USC 112, second paragraph, Claim 1 recites in the preamble a pilot valve for operating a hydraulically-actuated main valve, and recites that the main valve has a supply port. In Claim 7, both the main valve supply port and the main valve are recited in a manner that recognizes that those items have been previously cited in the preamble. Claim 7 has been amended to recite an antecedent basis for the main valve.

Claims 1-6 and 8-13 were rejected as being anticipated by U.S. Patent 4,156,437. The '437 patent is directed to a selector to port various supply ports to a central outlet port. The valve disclosed in this reference raises the seal carrier 36 and the seal 42 out of contact with the seal plate 20 when the solenoid 46 is energized, so that there is no seal friction resistance to rotation. Applicant submits that the elastomeric seal 42 disclosed in this reference would be destroyed by repeatedly passing over the port 22 if the seal plate were not lifted. There is thus no seal during actuation of this valve from one position to another position.

Claim 1 recites that the carrier supply port and the plate supply port are substantially centered about the axis of rotation to remain in sealed fluid communication during rotation. This is not true for the cited reference, in which the supply ports are all spaced from the

axis of rotation. Claim 1 further recites that the carrier function port and the plate function port are radially spaced from the axis of rotation, and in the cited reference the equivalent port is centered about the axis of rotation rather than being spaced from the axis of rotation. Claim 1 is thus distinguishable from the '437 patent.

Claim 1 has also been amended to recite that the function seal seals with the carrier function port and slideably seals with the planar sealing surface by a metal-to-metal seal during rotation of the seal carrier relative to the seal plate. The cited reference avoids a seal between the equivalent components during rotation of the seal carrier relative to the seal plate, and certainly does not disclose or suggest a metal-to-metal seal. The present invention reduces frictional forces caused by the metal seal during this rotation, but maintains metal-to-metal sealing engagement during rotation. The Examiner contends that the seals 32 of the cited reference effectively seal the metal of the seal plate with the metal of the seal carrier. The seal plate and the seal carrier are nevertheless spaced, as shown in Figure 1, and there is no metal-to-metal sealing engagement. Accordingly, Applicant respectfully submits that amended Claim 1 is patentably distinguishable from the '437 patent.

With respect to dependent Claim 2, this claim recites that the function seal comprises a function seal sleeve having a carrier end sealed with the carrier function port and a plate end extending to and in sealing engagement with the planar sealing surface of the seal plate. The Examiner contends that the o-ring 42 is a seal, but it is not a sleeve,

and it does not form a metal-to-metal seal with the planar sealing surface. With respect to dependent Claim 4, this claim calls for an elastomeric seal adjacent the carrier end of the function seal sleeve. The cited reference does not disclose the combination of a function seal sleeve and an elastomeric seal adjacent the carrier end of the function seal sleeve.

With respect to dependent Claim 5, the Examiner referenced the ball bearings in Figure 1 of the cited reference which support the seal plate. Applicant submits that the seal plate 20 of the cited reference is not supported on ball bearings, and that member 30 is an o-ring for sealing between the plates 20 and 28, and are not ball bearings.

With respect to dependent Claim 6, the cited reference discloses a purge port, but when the valve is in the inactive position, the plate function port does not vent to a plate vent port.

Regarding dependent Claim 8, Applicant submits that the cited reference does not disclose a supply seal sleeve having a carrier end sealed with a carrier supply port and a plate end extending to and in sliding sealing engagement with the planar sealing surface of the seal plate. The cited reference also does not disclose a supply seal sleeve in combination with an elastomeric seal as recited in Claim 9.

With respect to independent Claim 11, the comments above with respect to the position of the supply seal and the function seal relative to the seal carrier axis of rotation

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distinguish this claim from the cited reference. Claim 11 further recites that the function seal includes a function seal sleeve, with a plate end extending to and in slideable metal-to-metal sealing engagement with the planar sealing surface of the seal plate. As discussed above, this is not satisfied by the o-rings 42 disclosed in the cited reference, and the plate 36 is not in metal-to-metal sealing engagement with the plate 20. The features recited in dependent Claims 12 and 13 were discussed above.

In view of the above, early allowance of the application is requested.

Respectfully submitted,



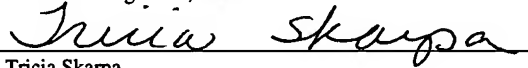
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